

PATENT ABSTRACTS OF JAPAN

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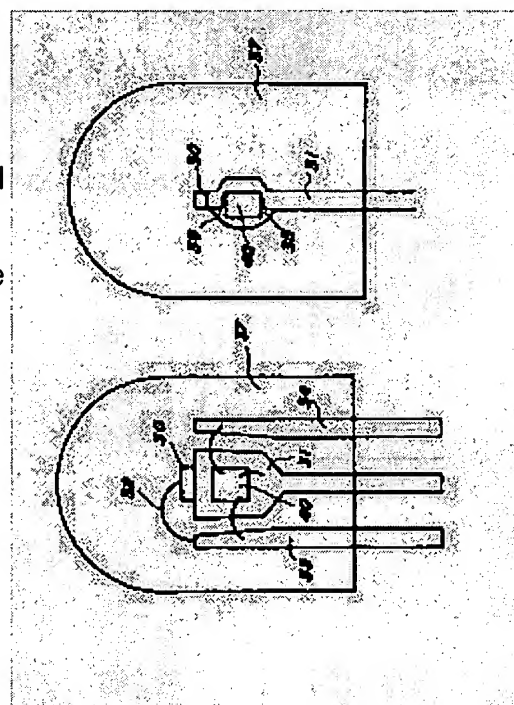
(54) DISPLAY DEVICE BY LIGHT-EMITTING DIODE

(57)Abstract:

PURPOSE: To miniaturize a display device by each mounting a light-emitting diode element and an IC for driving the element to the top section of a lead frame and the recessed section of the side surface of the lead frame, sealing the element, the nose section of the frame and the IC with a black resin and molding them with a dark group resin.

CONSTITUTION: A lead frame is constituted by three legs, and the width of a lead piece 31 at the center is widened. A recessed section 36 is formed at the central section, and a light-emitting diode element 30 is mounted to the top section of the lead piece 31. An Al wire 32 is bonded between an electrode for the light-emitting diode element 30 and a lead piece 33, and an

IC 40 is mounted in the recessed section 36. The IC 40 is sealed with a black resin 35, and the light-emitting diode element 30 and the IC 40 are molded with a dark red resin 37 because the light-emitting diode element infrared-ray emits. Since the IC 40 is molded with the dark red resin, the light emission of the light-emitting diode element 30 is transmitted, and the projection to the IC 40 of external rays is prevented.



LEGAL STATUS

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